

*CHONO ANGUSTIARUM*, A NEW GENUS AND SPECIES OF  
ZOBRACHOIDAE (CRUSTACEA: AMPHIPODA) FROM  
MAGELLAN STRAIT, WITH A REVISION OF  
UROHAUSTORIIDAE

Janice Clark and J. L. Barnard

*Abstract.*—The new genus and species, *Chono angustiarum*, from Magellan Strait, has characters of both Zobrachoidae and Urohaustoriidae. The Zobrachoidae are redefined to include genera with well developed epimeron 1, in contrast to Urohaustoriidae containing genera with vestigial epimeron 1. The previously described Magellanic genera *Huarpe* and *Tonocote* also represent intergrades between the two families as originally described from Australia where they are very distinctive.

---

*Chono angustiarum*, a new genus and species of Zobrachoidae is described from Magellan Strait. This marine fossorial amphipod almost perfectly intergrades between the Urohaustoriidae and Zobrachoidae by combining a well developed epimeron 1 with a simple gnathopod 1. Overlaps between the two families, so distinct in Australian waters, have already been described in Magellan genera such as *Huarpe* Barnard and Clark (1982) and *Tonocote* Clark and Barnard (1986). We are not prepared for final fusion of the two families because the genera remain distinctive on the basis of epimeron 1. In our redefinition the Zobrachoidae retain the plesiomorphic state of epimeron 1 in fully developed condition, whereas Urohaustoriidae have epimeron 1 vestigial or absent. The distinction remains strong. Structure of gnathopods is thereby discounted.

Methods of analysis follow Barnard and Drummond (1982). In the text, symbols "E" and "e" = large and small setae, "S" and "s" = large and small spines, "p" = penicillate seta, "R" = right sided appendage as contrasted to normal description based on left.

#### Discussion

When originally described from Australia (Barnard and Drummond 1982), the families Zobrachoidae (then three genera) and Urohaustoriidae (then six genera) were distinguished by the apomorphic characters of Urohaustoriidae as follows: simple gnathopod 1, strongly reduced coxa 2 in comparison to coxa 3, adze-shaped coxa 3 with large posteroventral projection, great reduction of epimeron 1, smallness of rostrum on head, small number of setae on inner plate of maxilla 1, more strongly extended incisor with reduced development of cusps, greatly reduced number of rakers, and generally the reduction in size of article 2 of outer ramus on uropod 3; to this could be added in retrospect the development of awns on the setae of the mandibular palp and the loss of lateral setae on the peduncle of uropod 2. Table 1 shows the overlaps between the old family extremes occurring in *Huarpe*, *Tonocote*, and *Chono*.

Characters of the table are stated in such a way that Zobrachoidae reflect (+) and Urohaustoriidae (0). The intermediate genera are placed in transformational order re-

Table 1.—Characters of Zobrachoidae and Urohaustoriidae from Australia compared to transitional Magellanic genera. Intermediate genera are arranged in their closest affinities. Asterisks denote strongest anomalies in this particular arrangement.

Character	Urohaustoriidae	<i>Chono</i>	<i>Huarpe</i>	<i>Tonocote</i>	Zobrachoidae	
1	0	0	+	+	+	Coxa 3 not adze-shaped
2	0	0	+	+	+	Coxa 2 not very small
3	0	0	0	+	+	Rakers 4+
4	0	+*	0	+	+	Outer ramus uropod 3 elongate
5	0	0	0	+	+	Gnathopod 1 subchelate
6	0	0	+	0*	+	Setae of mandibular palp not awned
7	0	0	+	0*	+	Uropod 2 peduncle with many lateral setae
8	0	0	+	0*	+	Mandibular incisors not extended
9	0	0	0	+	+	Setae on inner plate of maxilla 1 4+
10	0	+*	0	+	+	Epimeron 1 well developed
11	0	0	0	+	+	Rostrum strong
12	0	0	+	0*	+	Antenna 1 with setal crescent

flecting their closer affinities and the strongest anomalies in the selected sequence are marked with asterisks (\*). If one desired to place the intermediate genera into families, the families could be defined on any single character alternative or they could be divided by character groups 1-2, 3-5-9-11, 4-10, and 6-7-8-12. One would thus subjectively rank any single character state or group of states as more important than any other. The trends from (+) to (0) represent our opinion as to increasing apomorphy (0) and the immediate ancestor to this pool of 12 genera would reflect all (+), though a more remote ancestor might not; for example, the remotest ancestor of Amphipoda might have a simple gnathopod 1, no lateral setae on uropod 2, no rostrum, no antennal crescent, etc.

Besides the 12 characters of Table 1 we also selected 26 other character states often used for generic distinctions in this group but found those to vary within the original families described.

We continue to distinguish between the two families on the basis of epimeron 1 in Urohaustoriidae. The great reduction of epimeron 1 is extremely rare in amphipods; it occurs also in some freshwater amphi-

pods, some ingolfiellids and some corophioids, all of which exhibit a trend for the body to become cylindrical in contrast to the dorsoventral flattening found in haustorioids. Of course, one may also suggest that pleonite 1 (epimeron 1) of urohaustorioids actually has become cylindrical as a functional adaptation to improve the motion of the pleon, increase the space for musculature, and decrease friction with the appendages of the thorax which overlie epimeron 1.

*Relationships.*—*Chono* differs from Australian Zobrachoidae in the poorly developed rostrum, poorly toothed mandibular incisors, low number (fewer than 4) or absence of rakers, fewer than 4 setae on the inner plate of maxilla 1, dominant coxa 3, and simple gnathopod 1.

*Chono* differs from Australian Urohaustoriidae in the elongate article 2 on the outer ramus of uropod 3, the well developed epimeron 1, and the lack of size or setational dominance by epimeron 2.

*Chono* differs from both *Huarpe* and *Tonocote* in the adze-shaped dominant coxa 3 and small coxa 2 relative to coxa 3. *Chono* differs from *Tonocote* also in the loss or low number of rakers; simple gnathopod 1, weak

setation on maxilla 1 and weak rostrum. *Chono* differs from *Huarpe* also in the elongate article 2 on the outer ramus of uropod 3, unawned setae of the mandibular palp, lack of lateral setation on the peduncle of uropod 2, elongate incisors, well developed epimeron 1, and lack of setal crescent on article 1 of antenna 1.

The following new key distinguishes the 12 known genera of Urohaustoriidae and Zobrachoidae.

Key to the Genera of Urohaustoriidae and Zobrachoidae

- 1. Epimeron 1 well developed (Zobrachoidae) ..... 2
  - Epimeron 1 vestigial (Urohaustoriidae) ..... 6
- 2. Antenna 1 of urothoe form, with article 3 elongate, more than twice as long as broad ..... 3
  - Antenna 1 of haustorius form, article 3 not elongate, less than twice as long as broad ..... 4
- 3. Article 4 of antenna 2 narrow, epimeron 2 well developed, article 5 of pereopods 3-4 posteriorly spinose ..... *Prantinus*
  - Article 4 of antenna 2 broad, epimeron 2 reduced, article 5 of pereopods 3-4 posteriorly naked ..  
..... *Tonocote*
- 4. Coxa 3 dominant and adze-shaped, coxa 2 very small ..... *Chono*
  - Coxa 4 dominant, coxa 3 not adze-shaped, coxa 2 not very small .. 5
- 5. Telson elongate, rami of uropods 1-2 with many medial setae, no basoventral setae ..... *Zobracho*
  - Telson short, rami of uropods 1-2 lacking medial setae, bearing basoventral setae ..... *Bumeralius*
- 6. Dactyl of pereopod 5 spinose ... 7
  - Dactyl of pereopod 5 not spinose 9
- 7. Antennae bearing supernumerary oar-shaped setae, article 2 of pe-

- reopods 6-7 narrow or strongly tapering distally ..... *Narunius*
- Antennae lacking supernumerary oar-shaped setae, article 2 of pereopods 6-7 fully expanded, not tapering distally ..... 8
- 8. Coxa 3 large, coxa 4 small .....  
..... *Urohaustorius*
  - Coxa 3 small, coxa 4 large .....  
..... *Gheegerus*
- 9. Coxae 1 and 2 of equal size, epimeron 2 about equal in size to epimeron 3, lacking setae ..... *Dirimus*
  - Coxae 1 and 2 diverse, epimeron 2 either larger or more setose than epimeron 3 ..... 10
- 10. Gnathopod 2 subchelate, dactyls of pereopods 5-7 setose in female ..... *Tottungus*
  - Gnathopod 2 parachelate, dactyls of pereopods 5-7 not setose in female ..... 11
- 11. Coxa 1 smaller than coxa 2, coxa 3 smaller than 4, not adze-shaped, inner rami or uropods 1-2 fully developed, peduncle of uropod 2 with lateral row of setae ..... *Huarpe*
  - Coxa 1 larger than coxa 2, coxa 3 larger than 4, adze-shaped, inner rami of uropods 1-2 reduced or absent, peduncle of uropod 2 lacking lateral row of setae .... *Tuldarus*

Master Legend

Capital letters as follows refer to parts; lower case letters to left of capital letters refer to specimens noted in legends; lower case letters to right of capitals refer to adjectival modifications in list below: A, antenna; C, coxa; D, dactyl; F, accessory flagellum; G, gnathopod; H, head; I, inner plate or ramus; J, incisor; K, pleopod; L, labium; M, mandible; O, outer plate or ramus; P, pereopod; Q, seta; R, uropod; S, maxilliped; T, telson; U, labrum; V, palp; W, pleon; X, maxilla; Y, oostegite; Z, gill; d, dorsal; f, few



setae removed; r, right; s, setae removed; t, left.

*Chono*, new genus

*Diagnosis.*—Rostrum weak. Peduncle of antenna 1 short, stout, articles 2 and 3 of peduncle progressively shortened, weakly geniculate; primary flagellum elongate, accessory flagellum less than half as long as primary flagellum. Antenna 2 of haustorius form, article 4 expanded, article 5 small, articles 4–5 with facial armaments, article 4 with long ventral setae and subventral clusters of bifid setae. Aesthetascs simple. Mandibular incisors with long stem, thin, untoothed; right and left laciniae mobiles weakly diverse; no rakers; molar broad and bulky, not strongly extended, with weak triturative surface and weak accessory chopper; setae of palp article 3 awned. Mandibular lobes of lower lip well developed. Inner plate of maxilla 1 small, slightly broadened, poorly setose, outer plate with 9 spines (some specimens with 6, 7, or 8), palp short, unarticulate, palpar setae attached weakly in 2 sets. Inner plate of maxilla 2 feeble, with sparsely developed weakly submarginal oblique row of setae. Baler lobes present on maxillipeds, absent on maxillae. Outer plate of maxilliped with spines; palp article 2 expanded, article 3 elongate, dactyl clavate, 2-setose.

Coxae 1–2 together small, similar, subrectangular, coxae 3–4 together larger, coxa 2 larger than coxa 1, most of coxa 2 hidden by coxa 3; latter larger than coxa 4, adze-shaped and extended posteroventrally; coxae 2–6 with simple gills; oostegites 4 pairs, slender.

Gnathopods small, similar, gnathopod 1 simple, gnathopod 2 barely subchelate (debatable), carpus elongate, propodus weakly like a mitellid barnacle. Dactyls of pereopods 3–7 distinct, large, dactyls lacking setae and spines. Article 2 of pereopods 5–7 expanded, pereopod 5 of haustorius form; distal article of pereopods 6–7 not under-

slung, only moderately widened, pereopods 6–7 otherwise similar, not dominating pereopod 5.

Peduncle of pleopods wider than long, pleopod 3 smallest, inner rami moderately shorter than outer. Epimeron 1 distinctly developed; epimeron 3 dominant in size and setation. Urosomites scarcely produced and poorly setose ventrally. Inner ramus of uropods 1–2 absent, outer ramus linguiform, poorly setose marginally, each with 1 apical seta; peduncle of uropod 1 strongly setose laterally, of uropod 2 generally lacking long setae laterally. Uropod 3 of ordinary form, outer ramus dominant and biarticulate, article 2 with 2 large apical setae. Telson short, broader than long, deeply cleft.

*Description.*—Eyes indistinct or poorly visible. Dorsolateral surface of article 1 on antenna 1 with longitudinal row of setae; article 2 densely setose dorsolaterally, groups distinguishable, article 3 poorly setose. Article 3 of antenna 2 short, poorly setose; flagellum much longer than article 4 of peduncle.

Right lacinia mobilis small, slender, apically bifid, weakly bifid basally; left larger, broad, weakly bifid basally; article 3 of mandibular palp slightly shorter than article 2. Lower lip without cone on each outer lobe. Inner plate of maxilla 1 with 2 apicomedial setae; some spines on outer plate bifid. Inner plate of maxilliped with 2 stout apical spines. Coxae 1–2 poorly setose, gill 2 dominant, gills 5–6 tiny. Gnathopod 2 lacking surficial button combs.

Pereopods 3–4 lacking extensive secondary facial rows of spines on article 5.

Uropods 1–2 lacking huge dorsal setae on peduncles; peduncle of uropod 1 with bundle of ventral setae, on uropod 2 weakly setose medially; rami lacking basoventral setae.

*Type species.*—*Chono angustiarum* Clark and Barnard, new species.

*Composition.*—Unique.

*Etymology.*—Named for a tribe of South American Indians. Gender masculine.

*Chono angustiarum*, new species

Figs. 1-6

*Diagnosis.*—With the characters of the genus; unique features being loss of rakers, loss of surficial combs on gnathopod 2, weak mandibular lobes on lower lip outer lobes; single apical seta on uropods 1-2 rami; broad inner plate of maxilla 1 (2 apicomedial setae).

*Description of female "y," 1.87 mm (illustrated).*—Head about 0.7 times as long as wide (1.4 times as wide as long), rostrum about 5 percent as long as remainder of head, one setule at apex of lateral lobe. Primary flagellum of antenna 1 with 7 articles, formula of long aesthetascs = 0-0-0-1-1-1-1; accessory flagellum 3-articulate. Dorsal facial formula on article 1 of antenna 1 = 3 setae, 1 spine; on article 4 of antenna 2 in 3 sets of 4, 2, and 12, long spines dominant, on article 5 = 8 (all in transverse apical set); article 3 with 2 setae; flagellum with 5 articles. Spine formula on right and left mandibular palp article 3 = 4-1-2-1. Inner plate of maxilla 1 with 2 short apicomedial setae; outer plate with 9 spines. Inner plate of maxilla 2 with 4 facial setae. Inner plate of maxilliped with 1 medial and 2 apical setae; palp article 2 with 8 setae in facial row, article 3 lacking facial setae; basal articles of maxilliped broadened and with weakly developed baler lobe bearing 1 seta.

Coxae 1 and 2 subrectangular, coxa 1 smaller than coxa 2, both bearing 1 anterior setule; coxa 3 with 3 long and 1 medium posteroventral setae, and 2 ventral setules anterior to elongate setae; coxa 4 with 2 long and 1 short ventral setae and 5 medium to short posterior setae.

Gnathopods 1-2 with setal brushes on distal apex of articles 2 and 3. Setal and spine formula on pereopod 3 = 4, 2, 2-0, 3 + 1 + 2; pereopod 4 = 4, 2, 2-0, 3 + 1 + 2; article 2 of pereopods 5-6 with one mediofacial seta.

Peduncular spine formulas of pleopods 1-3 = 2 and 1, 2 and 0, 2 and 0; segmental

formulas = 13-? (broken, R = 9), 10-7, ? (broken)-8; basal setal formulas = 5-1-2-2, 2-1-1-1, 4-2-1-2.

Epimera 1 and 2 with setule placed in indentation on posterior margin; horizontal ventrofacial row of 2-3 setae on epimeron 2; epimeron 3 broadly rounded with posterior setule and 4 setae in horizontal ventrofacial row.

Lateral margin on peduncle of uropod 1 with 4 setae, 1 apicomedial seta, and 3-4 ventral setae; of uropod 2 with 2 (R = 3) apicolateral and 3 medial setae; ramus of uropod 2 with 2 (R = 1) medial setae. Apicolateral corner of peduncle on uropod 3 with 2 spines and 1 medium seta, medial margin with 1 medium seta, ventromedial apical row with 5 mixed setae, formula on lateral margin of article 1 on outer ramus = Es-Es, medial margin = E-E; formula on medial margin of inner ramus = E-Es.

Telson almost twice as wide as long, setal formula = 2p, p (medial setule being placed ventrally). Gland clusters indiscernible.

*Holotype female "z," 1.4 mm (illustrated).*—Main differences from female "y" mentioned.

Primary flagellum of antenna 1 with 6 articles, formula of long aesthetascs = 0-1-1-1-1-1. Facial armament formula on antenna 1 = 4 setae, one spinule; on article 4 of antenna 2 in 3 sections of 3, 2, and 9, very long setae dominant, on article 5 = 8. Inner plate of maxilla 2 with 5 facial setae (R = 3). Inner plate of maxilliped with 1 medial, 1 apicofacial, and 2 apical setae; palp article 2 with 2 setae in facial row. Coxa 3 with 3 long and 1 medium posteroventral setae and 1 medium and 2 short setae anterior to elongate setae; coxa 4 with 4 medium to short posterior setae. Setal and spine formula on pereopod 3 = 3, 2, 2-0, 3 + 1 + 2; pereopod 4 = 4, 3, 2-0, 3 + 1 + 3; segmental formulas of pleopods 1-3 = 12-7, 9-7, 9-7; basal setal formulas = 5-1-1-3, 2-1-2-1, 4-1-1-2.

Lateral margin of peduncle of uropod 1 with 3 setae and 2 ventral setae; of uropod

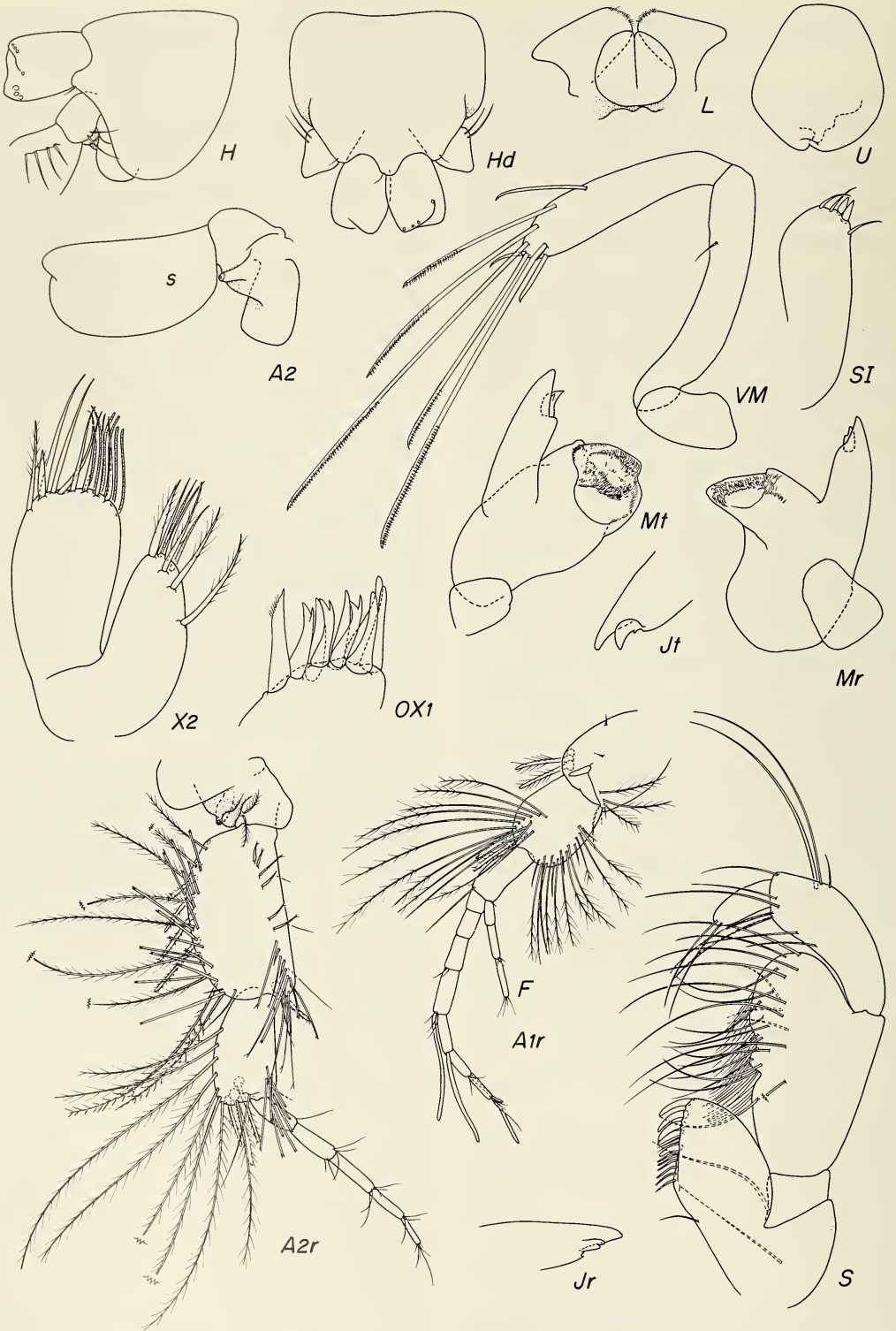


Fig. 1. *Chono angustiarum*, new species, holotype, female "y."



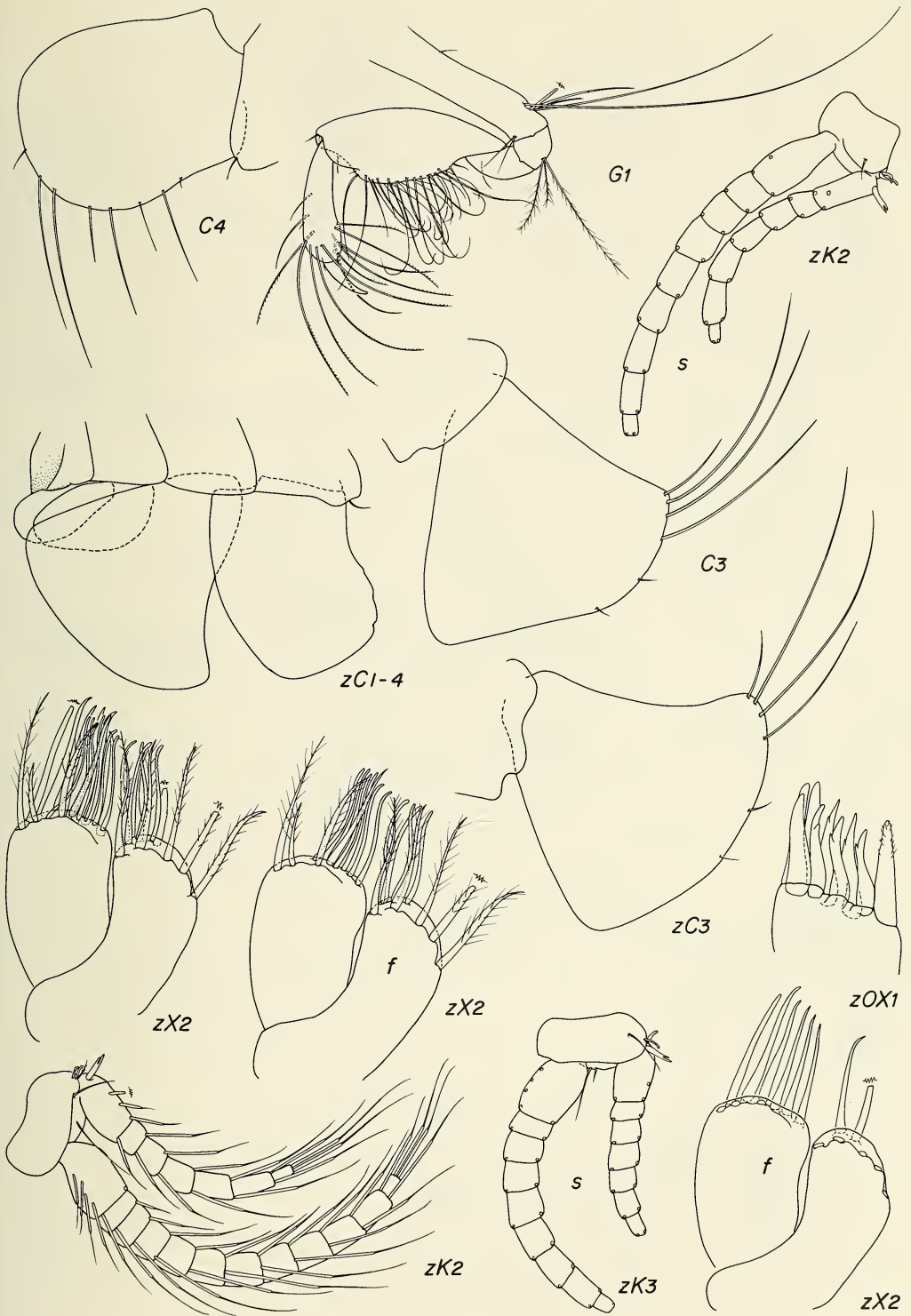


Fig. 2. *Chono angustiarum*, new species, holotype, female "y"; z = female "z."

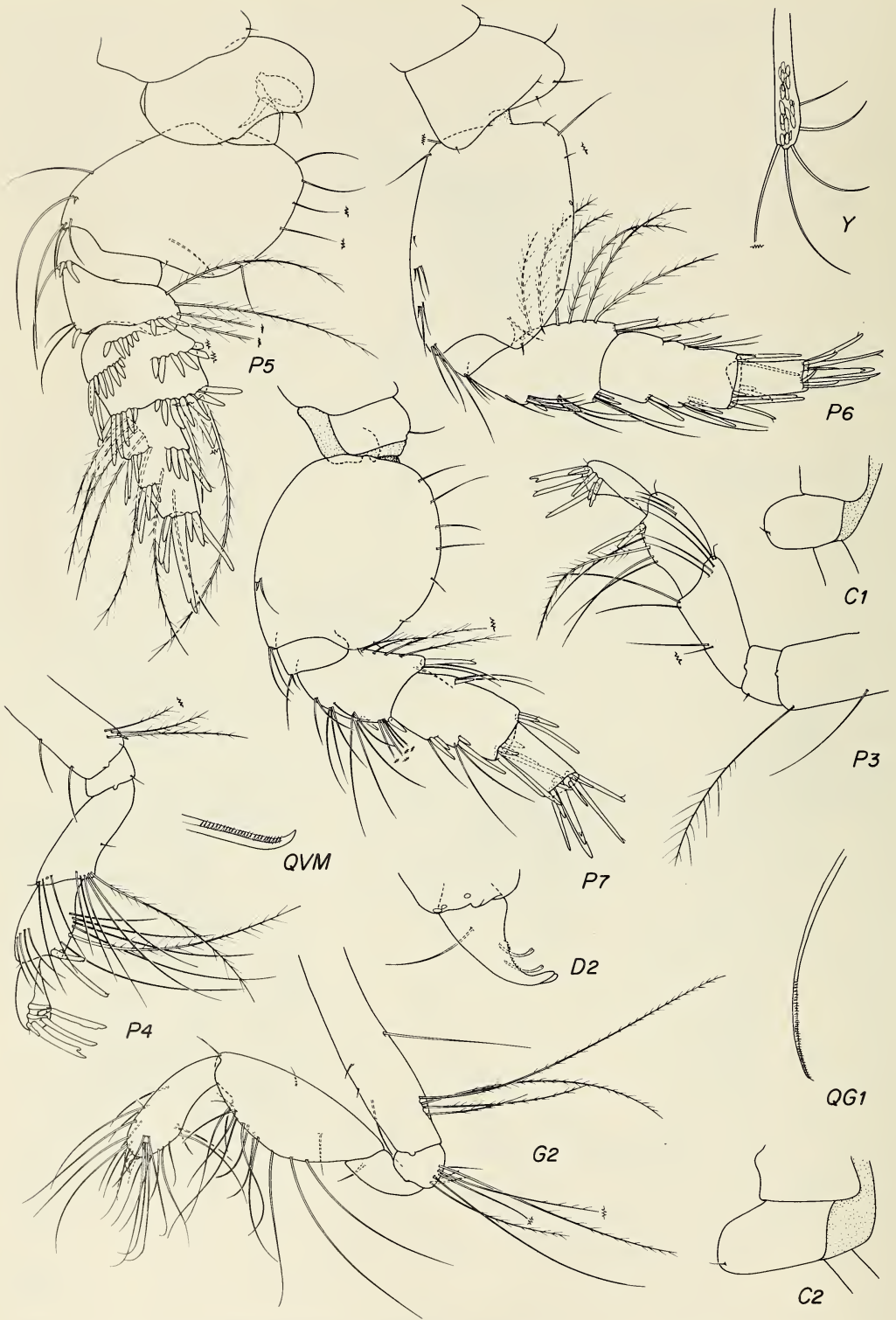


Fig. 3. *Chono angustiarum*, new species, holotype, female "y."



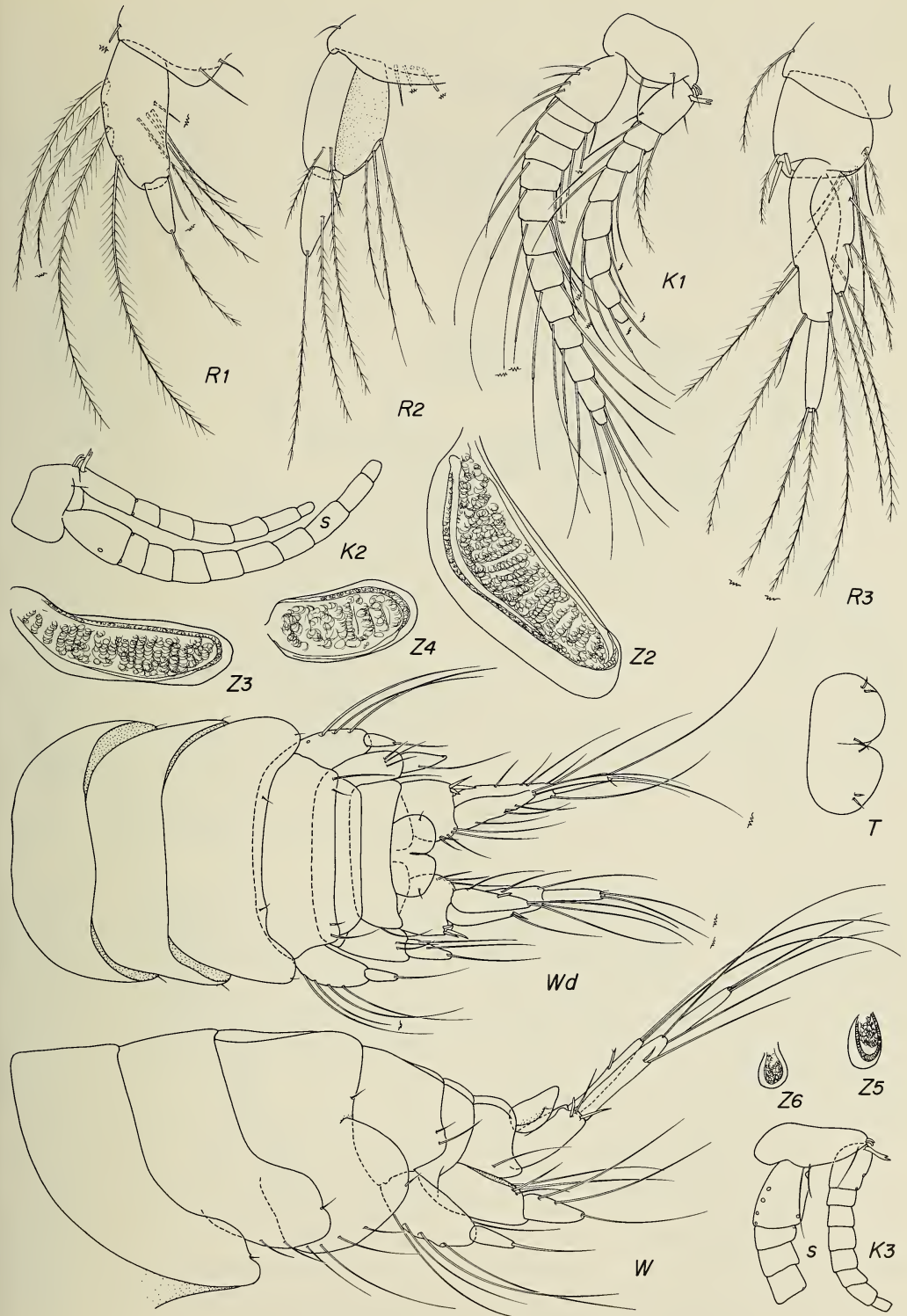


Fig. 4. *Chono angustiarum*, new species, holotype, female "y."

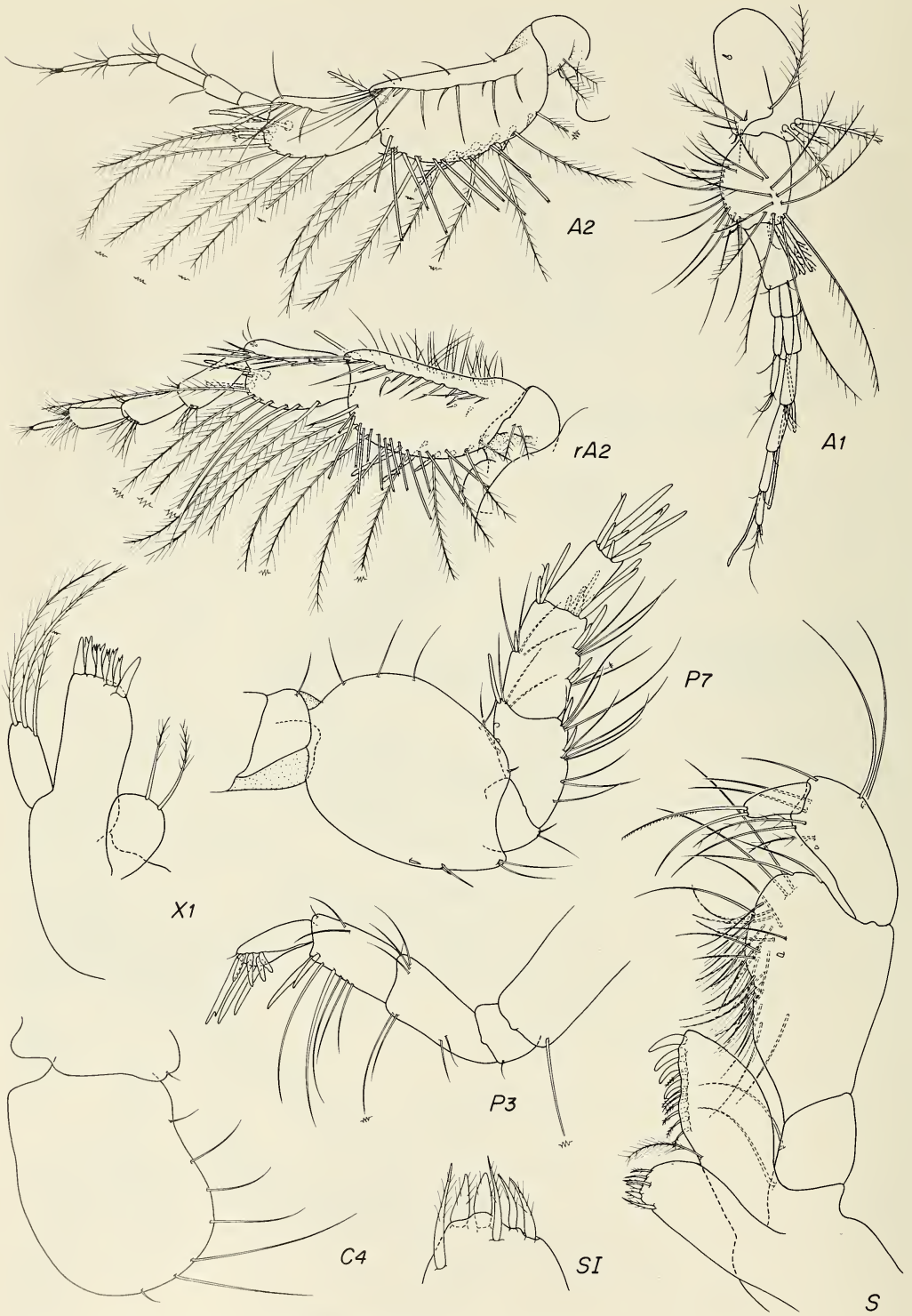


Fig. 5. *Chono angustiarum*, new species, female "z"; r = male "r."

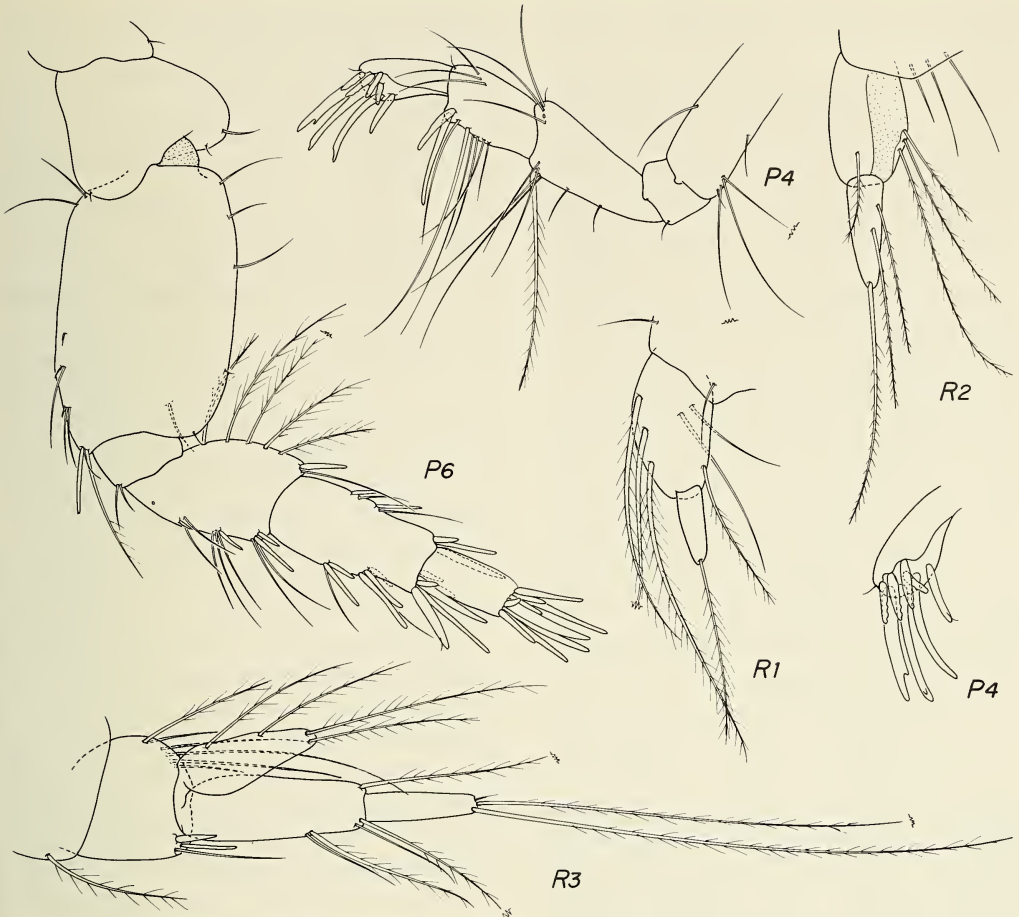


Fig. 6. *Chono angustiarum*, new species, female "z."

2 with 1 apicolateral and 3 medial setae; medial margin of outer ramus of uropod 3 naked, inner ramus formula = E-E.

Generally differing from female "y" in less setose article 2 of pereopods 6-7, larger uropod 3, longer spines on antenna 2, and more setose inner and outer plates of maxilla 2.

*Immature female "x," 1.30 mm.*—Main differences from female "y" mentioned.

Ostegites rudimentary. Primary flagellum of antenna 1 with 6 articles, formula of long aesthetascs = 0-1-1-1-1-1. Facial formula on antenna 1 = 3 setae; on article 4 of antenna 2 weakly divided into 3 sections of 1, 2, and 5, long spines dominant, on article

5 = 4, article 3 with 1 seta; flagellum with 4 articles. Formula on right and left mandibular palp article 3 = 2-1-2-1. Maxilla 1 outer plate with 8 spines. Inner plate of maxilla 2 with 5 facial setae. Maxilliped palp article 2 lacking facial row of setae.

Coxa 3 with 3 long posteroventral setae and 2 short ventral setae anterior to elongate setae; coxa 4 with 2 long ventral setae and 3 long to medium posterior setae.

Setal and spine formulas on pereopod 3 = 2, 1, 2-0, 2 + 1 + 2; pereopod 4 = 2, 1, 2-0, 2 + 1 + 2. Peduncular spine formulas of pleopods 1-3 = 2 and 0, 2 and 0, 2 and 0; rami articular formulas = 9-6, 8-5, 8-6 (R = 10-7, 8-5, 8-5); basal setal formulas =



4-1-1-1, 1-1-1-1, 1-0-1-2 (right = 4-1-2-1, 1-1-1-1, 1-1-1-1).

Epimeron 3 with 3 facial setae in horizontal row. Lateral margin on peduncle of uropod 1 with 2 setae and 1 ventral seta; of uropod 2 with 1 apicolateral seta and 2 apicomedial setae; ramus of uropod 2 with 1 medial seta. Peduncle of uropod 3 with 2 ( $R = 3$ ) setae in ventromedial row, formula on lateral margin on outer ramus = E ( $R =$  naked), medial margin naked; inner ramus naked medially.

Generally different from female "y" in that uropods 1, 2 and 3 less setose, epimeron 3 less setose, pleopods fewer articles and basal setae, antennae 1 and 2 with fewer articles and setae, maxillipedal palp less setose, mandibular palp less setose, maxilla 1 outer plate less spinose, coxae 3-4 less setose, and all legs less setose.

*Male "r," 1.52 mm.*—Like female "y" except for the following.

Primary flagellum of antenna 1 with 8 ( $R = 9$ ) articles, formula of long aesthetascs = 4-4-5-2-3-1-1-1 ( $R = 4-2-3-2-3-2-1-1$ ); facial row on article 4 of antenna 2 with 16 medium to long spines in weakly divided sections; facial row on article 5 with 7 spines; article 3 with 2 setae; flagellum with 4 articles, all but distalmost article distally widened. Outer plate of maxilla 1 with 8 spines. Inner plate of maxilla 2 with 2 facial setae. Maxillipedal palp article 2 with 2 setae in facial row.

Gnathopod 2 dactyl with minute serrations along inner margin.

Coxa 4 with 4 ( $R = 3$ ) medium to long posterior setae.

Setal and spine formula on pereopod 3 = 4, 3, 2-0, 3 + 1 + 3; pereopod 4 = 4, 4, 2-0, 3 + 1 + 3.

Segmental formulas of pleopods 1-3 = 13-9, 10-8, 11-8; basal setal formulas = 5-1-1-2, 3-1-1-1, 3-1-1-2. Epimeron 2 with facial row of 4 setae, epimeron 3 with 5 in horizontal facial row.

Lateral margin on peduncle of uropod 1

with 5 setae and 3 ventral setae ( $R = 4$ ); on uropod 2 with 2 medial setae. Apicolateral corner of peduncle on uropod 3 with 3 spines and 1 seta; ventromedial apical row with 4 setae, formula on lateral margin of article 1 on outer ramus = E-E-EE, medial margin = E-E ( $R = E$ ); formula on medial margin of inner ramus = E-E-Es.

Generally different from female "y" in less setose coxa 4, fewer spines on maxilla 1 outer plate, more setae and spines on dactyls of pereopods 3-4, epimera 2-3 more setose, uropod 1 laterally more setose, uropod 3 rami more setose and peduncle more spinose, maxillipedal outer plate less spinose and setose, antenna 2 spines longer on articles 4-5, and article 6 on pereopod 7 anterior margin with one spine.

*Male "u," 1.24 mm.*—Like female "y" except for the following.

Primary flagellum of antenna 1 with 6 articles, formula of long aesthetascs = 1-1-2-1-1-1 ( $R = 1-1-1-1-1-1$ ). Facial setae on article 4 of antenna 2 in 3 groups of 1-2-6 ( $R = 1-1-6$ ), on article 5 = 5 in transverse apical row; flagellum with 5 articles, all but distal article distally widened. Formula on left mandibular palp article 3 = 2-1-2-1 ( $R = 2-1-1-1$ ). Outer plate of maxilla 1 with 7 spines. Inner plate of maxilla 2 with 3 facial setae. Inner plate of maxilliped with 1 medial, 1 facial and 2 apical setae; palp article 2 with 1 facial seta.

Coxa 3 with 3 posterior apical and 2 short ventral setae; coxa 4 with 3 posterior and 2 ventral setae.

Setal and spine formula on pereopod 3 = 2, 1, 2-0, 2 + 1 + 2; pereopod 4 = 2, 1, 2-0, 2 + 1 + 2. Coupling spine formulas of pleopods 1-3 = 2 and 0, 2 and 0, 2 and 0; articular formulas = 9-6, 8-5, 8-5; basal formulas = 5-1-1-3, 1-1-1-2, 3-1-2-2.

Horizontal facial row on epimeron 2 with 2 setae, on epimeron 3 with 3 setae. Peduncle of uropod 1 with 3 setae along lateral margin, no ventral setae; uropod 2 peduncle with 1 apicolateral seta, ramus with 1 me-

dial seta. Apicolateral corner of peduncle on uropod 3 with 2 spines and 1 seta, medial margin with 1 seta, ventromedial apical row with 2 setae, formula on lateral margin of article 1 on outer ramus = EE-EE, medial margin = E-E; formula on medial margin of inner ramus = E-E.

Generally different from female "y" in fewer setae and spines overall, and pleopod 1 with no simple spine in conjunction with coupling hooks.

*Juvenile "t," 0.89 mm.*—Like female "y" except for the following.

Primary flagellum of antenna 1 with 5 articles, formula of long aesthetascs = 0-1-1-1-1; facial formula on article 4 of antenna 2 in 3 sections of 1, 1, and 2 long spines, on article 5 = 2 (all in transverse apical set); article 3 with 1 seta; flagellum with 4 articles. Formula on right and left mandibular palp article 3 = 2-1-1-1. Outer plate of maxilla 1 with 6 spines. Inner plate of maxilla 2 with 3 facial setae. Inner plate of maxilliped with 1 medial, 1 facial, and 2 apical setae; palp article 2 with 1 facial seta.

Coxa 3 with 2 long posterior setae and 1 medium ventral seta; coxa 4 with 2 posterior and 1 ventral setae. Setal and spine formula on pereopod 3 = 1, 0, 2-0, 2 + 1 + 1; pereopod 4 = 1, 0, 2-0, 2 + 1 + 1.

Coupling spine formula of pleopods 1-3 = 2 and 0, 2 and 0, 2 and 0; segmental formulas = 8-5, 6-4, 6-4; basal formulas = 2-1-1-2, 1-1-1-1, 2-1-1-1. Epimeron 2 with 1 facial seta; epimeron 3 with 2 facial setae. Lateral margin on peduncle of uropod 1 with 1 seta, no ventral setae; of uropod 2 with no apicolateral setae and 1 medial seta; rami of uropods 1 and 2 naked except for single apical seta on each. Apicolateral corner of peduncle on uropod 3 with 1 seta, apicomedial corner with 1 seta; lateral margin of article 1 on outer ramus with 2 apical setae.

Different from female "y" in less setosity and spinosity generally, antenna 1 less setose than article 2, antenna 2 article 3 less setose, article 4 with glassy spines on dis-

talmost margin only, and article 5 fewer facial and ventral setae.

*Holotype.*—USNM 195156, female "z," 1.44 mm (partially illustrated).

*Type locality.*—HZ1, University of Concepción, Metula Survey, Eastern Magellan Strait, 52°39.9'S, 69°35.9'W, 7-9 m, sand and shell, 9 Apr 1976, coll. Dr. Victor A. Gallardo.

*Voucher material.*—All close to type locality, 4-11 m. Female "z," 1.44 mm (holotype); female "y," 1.87 mm; female "w," 1.33 mm (immature); female "x," 1.30 mm (mmature), other females 1.35 mm, 1.30 mm, 1.25 mm, 1.24 mm. Male "r," 1.52 mm; male "v," 1.25 mm, male "u," 1.24 mm. Juvenile "s," 1.09 mm; juvenile "t," 0.89 mm, other juveniles 1.18 mm, 1.13 mm, 1.09 mm, 1.01 mm.

*Etymology.*—"angustiarum," meaning "of the straits," was selected because type locality is located between two narrows.

*Distribution.*—Magellan Strait, 4-11 m.

#### Note on *Phoxocephalopsis*

Barnard and Clark (1984) were unaware of a paper by Varela (1983) describing *Phoxocephalopsis mehuinensis*. That species appears to differ from our *Phoxocephalopsis gallardoi* in the presence of setae on the peduncle of uropod 2, a dense bundle of medioventral setae on the peduncle of uropod 1, much narrower article 6 of pereopod 5, tooth of epimeron 3 more strongly ventral and bearing a long posterior seta, lack of setae on article 2 of the mandibular palp, narrower rostrum, facial spines on article 4 of antenna 1 in a single row versus in groups of 3-4, weaker setation on the inner plate of maxilla 2, and much shorter article 2 on the outer ramus of uropod 3.

#### Acknowledgments

We thank Dr. Victor A. Gallardo for giving us the specimens for study and Ms. Linda B. Lutz for inking our illustrations. Dr.

Michael H. Thurston kindly reviewed the manuscript.

### Literature Cited

- Barnard, J. L., and J. Clark. 1982. *Huarpe escofeti*, new genus, new species, a phoxocephalopsid amphipod from the shores of Argentina (Crustacea, Amphipoda, Phoxocephalopsidae).—*Journal of Crustacean Biology* 2:281–295, 6 figs.
- , and ———. 1984. Resdescription of *Phoxocephalopsis zimmeri* with a new species, and establishment of the family Phoxocephalopsidae (Crustacea, Amphipoda) from Magellanic South America.—*Journal of Crustacean Biology* 4:85–105, 10 figs.
- , and M. M. Drummond. 1982. Gammaridean Amphipoda of Australia, Part V: Superfamily Haustorioidea.—*Smithsonian Contributions to Zoology* 360:i–iv + 1–148, 58 figs.
- Clark, J., and J. L. Barnard. 1986. *Tonocote*, a new genus and species of Zobrachoidae from Argentina (Crustacea, Marine Amphipoda).—*Proceedings of the Biological Society of Washington* 99:225–236, 6 figs.
- Varela, C. 1983. Anfipodos de las playas de arena del sur de Chile (Bahia de Maiquillahue, Valdivia).—*Studies on Neotropical Fauna and Environment* 18:25–52, figs. 1–14.

Department of Invertebrate Zoology,  
NHB-163, National Museum of Natural  
History, Smithsonian Institution, Wash-  
ington, D.C. 20560.